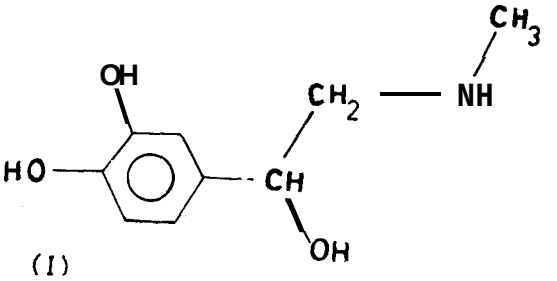
Reprinted from Current Science May 5. 1982, Vol. 51, No. 9.466

CRYSTAL DATA ON L-EPINEPHRINE HYDROCHLORIDE MONOHYDRATE

B. M. VEDAVATHI, A. MANI AND KALYANI VIJAYAN
Materials Science Division, National Aeronautical Laboratory, Bangalore 560 017. India.

EPINEPHRINE (or adrenaline) (I), is known to possess protective action against ionizing radiation!. As part of a series[2,3] of x-ray investigations on chemical radioprotectants, preliminary crystal data have been collected on L-epinephrine hydrochloride monohydrate. Commercially obtained L-epinephrine was dissolved in dilute hydrochloric acid and needle-shaped brownish crystals of the title compound were obtained by slow evaporation. Unit cell dimensions and space group were determined from oscillation and Weissenberg photographs. Presence of the chloride ion was verified by conducting the 'chloride test' and the presence of the adrenaline moiety was confirmed from an ultraviolet absorption spectrum. The preliminary crystal data have been listed in table I.



(I)

TABLE 1

Crystal data on Lepinephrine HCl. H_2O

Formula	$C_8H_{13}NO_3.HCl.H_2O$
Molecular weight	219.6
Crystal system	Triclinic
a	= 10.59 ± 0.02 Å
b	= 10.61 ± 0.02
c	= 11.12 ± 0.01
α	= 112.6 ± 0.3"
β	= 90 ± 0.2
γ	= 100.6 ± 0.3
Space group	PI or $P\bar{1}$
Density (Calc)	1.40 g cm^{-3}
Density (Expt) (Flotation in acetone and CCl_4)	1.40 g cm^{-3}
Z	= 4

12 January 1982

1. Gray, J. L., Moulden, E. J., Tew, J. T., and Jensen, H., *Proc. Soc. Exp. Biol.*, 1952, 79, *384.*
2. Vedavathi, B. M., and Vijayan, K., *Acta. Crystallogr.*, 1981, B37, 475 and the references therein.
3. Mani, A., Vedavathi, B. M., and Vijayan, K., *Curr. Sci.*, 1982, (In press).